Having a remarkable bent for this work, he developed his gift, 805
acquired fame, and was consulted by all those who wished to know their age, or the date of some event. This increased his powers. He took a great delight in these consultations and, working at his subject every day, aided by his wonderful memory he could recite the whole chronology without the slightest hesitation. I give it in Appendix I* and it is worthy of publication, not only as a proof of the possibility of a development in arithmetic amongst raw Natives, but also for its contents, as a contribution to the history of the Northern Transvaal.

We come to the same conclusion when teaching our pupils 803
arithmetic in our missionary schools. This is certainly the 163
branch of study in which they are the least proficient, and their teachers will all confess to having sometimes despaired of their mathematical faculty. However, when taught European numeration, English or Portuguese, most of them learn the four rules, and many attain to the Weights and Measures, and the Rule of Three. I saw a class of young Natives successfully studying Algebra in Lovedale, and they are not altogether incapable of Arithmetic. However they succeed better when the effort is one of memory, and this explains why they are much more at their ease when learning the English Weights and Measures, entailing complicated operations of reduction, than when put to the metric system which seems so much more simple and rational. The English system requires a perfect committal to memory of the relation between the various measures, yards, feet and inches, gallons, pints, gills, pounds, ounces and grains, and, these being once mastered, all the work becomes purely mechanical. This is what Natives like, whilst in the metric system there is one idea pervading the whole and a certain minimum of reasoning is necessary for its use : the necessity for this minimum explains the unpopularity of the metric system amongst the Native pupils, and the difficulty increases ten times when they come to problems, and have to solve them without having been told whether addition or substraction is necessary! So arithmetic, when workable by means of the memory, seems to them an easy and agreeable study ; when it requires reasoning, it is a painful occupation. If

* [See pp. 585-587 -- Analyst]

Shinangana had been trained, would he have been a genius in that kind of mathematics where the power of reasoning is needed? It is impossible to say, but it may be noticed that all his achievements were, after all, but masterpieces of memory, and that reasoning had very little to do with them. 803 163

The conclusion of our observations is then as follows : in the Bantu mind the literary sense is infinitely more developed than the mathematical. This is probably the case in all uncivilised or half civilised races, but amongst the South Africans it is strikingly apparent.

F. THE LITERARY SENSE OF THE THONGAS.

Let us look more closely into this literary faculty which the Thonga grammar has already revealed to us. It not only consists in the possession of a well constructed language, denoting powers of classification, combination, co-ordination and graphic description, but also shows itself in the poetic expression of their feelings, in a remarkable power of comparison, and in a rich folklore. 521 537

The *facility of expression*, amongst the Thongas, is very great. Any one, man or woman, is at any time ready to speak, and speaks correctly with the greatest ease. In this respect, the race is perhaps more advanced than many civilised peoples. There is nothing like the timidity you so often meet with amongst the peasants or workmen of our own lands, who, though they have had a full course of primary education, would be totally unable to deliver an address. A Native can always stand up and say what he thinks on any given question. Even if he has not thought much about it, he can speak! Finding words is no difficulty to him. Knowledge will perhaps be lacking, but fluency of speech never! This ease of elocution has evidently been acquired through a long experience in the discussion of public affairs on the *hubo*, where, as we saw (I, p. 436), every one has the right of expressing his opinion. This habit has developed literary ability,